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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,011	04/07/2006	Graeme Moad	PP/15-22778/CGM 522/A/PCT	1662
324	7590	12/07/2007	EXAMINER	
CIBA SPECIALTY CHEMICALS CORPORATION			LEE, RIP A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.	Applicant(s)
10/533,011	MOAD ET AL.
Examiner	Art Unit
Rip A. Lee	1796

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) 5, 13 and 14 is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07-20-05/06-30-06.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____.
- 5) Notice of Informal Patent Application
- 6) Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities: A non-ionic surfactant, ipso facto, would not contain cationic onium functionality. As such, this latter portion of the claim is superfluous and does not limit further the former portion of the claim. Appropriate correction is required.
2. Claims 13 and 14 are objected to because of the following informalities: It is not clear whether further additives are present in the melt mixing step or in the preparation of nanocomposite material. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 provides for the use of a non-ionic surfactant, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 19 is also rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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8. Claims 1-7, 9-14, 16, 18, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Dontula *et al.* (U.S. 6,841,226).

Dontula *et al.* teaches a process of melt blending polyolefin and about 5 wt % of ethoxylated alcohol wax intercalated smectite clay (see in particular, col. 4, lines 26-67, col. 5, line 54 - col. 6, line 12, col. 6, lines 63-67, col. 7, lines 60-67, examples 11 and 12). The resulting blend is used to prepare a product that has the form of a sheet. The sheet is incorporated into a composite article, said article being an imaging member. Dontula *et al.* teaches preparation of the composite article by combining the base layer with an image layer that contains silver halide grains. Silver halide grains qualify as pigment.

9. Claims 12 and 13 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Dontula *et al.* (U.S. 6,841,226) in view of Mehta *et al.* (U.S. 6,844,389).

Dontula *et al.* is silent with respect to compounding additives, however, at the time the invention was made, use of compounding additives was known to those having skill in the extrusion art. Mehta *et al.* discloses use of processing aids, as well as antioxidants, UV stabilizers, acid scavengers, colorants, clarifiers, and heat stabilizers as useful materials for preparing polyolefin-clay nanocomposite materials (col. 8, lines 27-39). It would have been obvious to one having ordinary skill in the art to incorporate such compounding additives during the melt mixing stage of Dontula *et al.* in order to gain the benefits conferred therefrom, and since this is shown to work in the prior art, one having skill in the art would have expected such an embodiment to work.

10. Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dontula *et al.* (U.S. 6,841,226) in view of Mehta *et al.*

Dontula *et al.* is silent with respect to compounding from a concentrate or masterbatch. However, at the time the invention was made, use of concentrates, or masterbatches, was known to those having skill in the extrusion art. For instance, Mehta *et al.* discloses preparing polyolefin-clay nanocomposites in which the clay filler is let down into the polymer matrix by use of a concentrate. As appreciated in the art, use of concentrates allows for more effective

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incorporation of compounding ingredients into a polymer matrix, and it minimizes the number of materials that must be stored and handled by processors. Typical concentrates contain 20-60 wt % of clay and other processing additives (col. 7, line 61 - col. 8, line 26). The disclosure of Mehta *et al.* would have suggested to one having skill in the art that compositions of Dontula *et al.* may be prepared more conveniently using the masterbatch technique, and therefore, it would have been obvious to one having ordinary skill in the art to make compositions of Dontula *et al.* via a masterbatch, as prescribed in Mehta *et al.* Since this process is well-established in the art, one having ordinary skill in the art would have expected such a combination to work with a reasonable expectation of success.

11. Claims 1-5, 7, 8-14, and 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Rosenthal *et al.* (U.S. 6,864,308).

Rosenthal *et al.* teaches a process of melt blending a mixture of polyolefin, smectite clay, and an intercalating agent such as glycerol monostearate, saturated fatty amide, sorbitan monostearate, sorbitan tristearate (col. 2, lines 57-67, examples 2-4, claims). Stabilizer is also added to the mixture during melt blending (table 1).

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenthal *et al.* in view of Mehta *et al.*

Rosenthal *et al.* is silent with respect to compounding from a concentrate or masterbatch. However, at the time the invention was made, use of concentrates, or masterbatches, was known to those having skill in the extrusion art. For instance, Mehta *et al.* discloses preparing polyolefin-clay nanocomposites in which the clay filler is let down into the polymer matrix by use of a concentrate. As appreciated in the art, use of concentrates allows for more effective incorporation of compounding ingredients into a polymer matrix, and it minimizes the number of materials that must be stored and handled by processors. Typical concentrates contain 20-60 wt % of clay and other processing additives (col. 7, line 61 - col. 8, line 26). The disclosure of Mehta *et al.* would have suggested to one having skill in the art that compositions of Rosenthal *et al.* may be prepared more conveniently using the masterbatch technique, and therefore, it would have been obvious to one having ordinary skill in the art to make compositions of Rosenthal *et al.*

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al. via a masterbatch, as prescribed in Mehta *et al.* Since this is process is well-established in the art, one having ordinary skill in the art would have expected such a combination to work with a reasonable expectation of success.

13. Claims 1, 5-14, and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitehouse *et al.* (U.S. 6,268,407).

Whitehouse *et al.* teaches a composition comprising a melt mixture of polyolefin, filler, and up to 50 parts by weight of non-ionic surfactant selected from fatty alcohol ethoxylate, fatty acid ethoxylate, fatty amine ethoxylate, fatty amide ethoxylate, glycerol ester ethoxylate, or sorbitan ester ethoxylate (claims 1 and 4). Composition further comprise processing aids, stabilizers, and antioxidants (claim 6).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu S. Jagannathan, can be reached at (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



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December 5, 2007